

REMARKS

Claims 11, 14-18, and 23-24 have been amended. Support for the amendments can be found in the specification at page 4 lines 33-34 and page 5 lines 1-3; page 8 lines 27-32; page 9 lines 13-29; page 11 lines 8-34 and page 12 lines 1-4; and Figures 1-4.

Claims 25-29 are new. Support for the new claims can be found in the specification, in particular: claim 25 at page 11 lines 8-10; claim 26 at page 11 lines 29-31; claim 27 at page 11 lines 8-10 and 29-31; claim 28 at page 11 lines 8-11; and claim 29 at page 11 lines 8-11 and 29-31.

Claim 13 has been cancelled.

No new matter has been added.

The pending claims are 11, 12, and 14-29.

Rejections under 35 U.S.C. § 102(b)

Claims 11, 12, 14-16, 20, 22, 23 and 24 stand rejected under 35 U.S.C. § 102(b) as anticipated by Gorrell, U.S. 3,647,508. According to the Examiner, Gorrell teaches a process for the partial demineralization of a first multilayer substrate as claimed.

The MPEP provides that a reference must teach each and every element of the claim to be anticipatory. MPEP 2131.

Gorrell discloses a method for making patterned metal coatings by selective etching of metal. Specification at column 1 lines 1-2. The method includes the steps of (a) metal coating a substrate; (b) print-etching a desired pattern in the metal substrate, including the steps of applying the etching medium to the coating in a defined pattern, drying the medium

and optionally removing the etch residue, and (c) optionally cutting to a desired size for final use. Specification at column 9 lines 10-16.

Amended claim 11 is directed to a process for the partial demetallization of a multilayer laminate that comprises a first film and a second film. The first film is composed of two layers, a first polymeric layer and a metallic layer. The second film is also composed of two layers, a second polymeric layer and an adhesion layer. The claimed process includes the elements: (1) applying an etchant lacquer to the metallic layer; (2) applying an adhesive layer to the second polymeric film, (3) joining the first film and the second film wherein the adhesive layer of the second film contacts the partially demetallized layer of the first film, wherein the lamination step is in-line with the demetallization step; (4) wherein the etchant lacquer comprises at least one metal dissolving etchant on the metallic layer in a quantity of about the stoichiometrical amount needed to dissolve the metallic layer and to eliminate any chemical reactivity of the at least one etchant towards the adhesive layer; (5) wherein the dissolved metal remains within the multilayer laminate; and (6) the dissolution of the metal creates a substantially transparent window in the metallic layer in a washing-free step.

Gorrell does not disclose the following elements found in amended claim 11: lamination, where the lamination step is in-line with the etching step; and the non-reactivity of the etchant-metal complex with the adhesion layer. Accordingly, because Gorrell does not teach each and every element of claim 11, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 102(b) rejection.

35 U.S.C. § 103(a) rejection.

Claims 13, 19 and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over Gorrell in view of Wilson, U.S. 4,959,120. The Examiner finds that Wilson teaches the use of a second laminate and the fine tuning of the etchant concentration by choosing the correct cylinder depth as in claims 19 and 21.

The Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 17, 86 S.Ct. 684, 694 (1966) set out the factual inquiry which the various district courts and the Patent Office must follow in determining obviousness. The Supreme Court's mandate was as follows:

"[u]nder 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances."

Scope and Content of the Prior Art

As discussed above, Gorrell discloses a method for making patterned metal coatings by selective etching of metal. Specification at column 1 lines 1-2. The method includes the steps of (a) metal coating a substrate; (b) print-etching a desired pattern in the metal substrate, including the steps of applying the etching medium to the coating in a defined pattern, drying the medium and optionally removing the etch residue, and (c) optionally cutting to a desired size for final use. Specification at column 9 lines 10-16.

Wilson, US 4,959,120, discloses the demetallization of thin, uniform metal films that have a plastic support. Different amounts of metal are removed from the uniform metal film in different areas or regions. The metal is removed by exposing different regions of the metal film to different amounts of an etchant. Specification column 2 lines 11-20, 40-43, and 52-58. Wilson also discloses

lamination to a "sheet of paperboard" at column 4 lines 60-63, the use of a gravure roll (or flexographic roll) at column 5 lines 26-30 and 43-44, and the use of a varnish coating applied in a pattern by halftone printing at column 6 lines 39-41,

Differences Between the Prior Art and the Claims at Issue

As discussed above, amended claim 11 is directed to a process for the partial demetallization of a multilayer laminate comprising the steps of: (1) applying an etchant lacquer to the metallic layer of the first film; (2) applying an adhesive layer to the second polymeric film, (3) joining the first film and the second film where the adhesive layer of the second film contacts the partially demetallized layer of the first film, where the lamination step is in-line with the demetallization step; (4) where the etchant lacquer comprises at least one metal dissolving etchant on the metallic layer in a quantity of about the stoichiometrical amount needed to dissolve the metallic layer and to eliminate any chemical reactivity of the at least one etchant towards the adhesive layer; (5) wherein the dissolved metal remains within the multilayer laminate; and (6) the dissolution of the metal creates a substantially transparent window in the metallic layer in a washing-free step.

Gorrell does not disclose the following elements of amended claim 11: lamination and the non-reactivity of the etchant-metal complex with the adhesion layer.

Wilson does not disclose the following elements of amended claim 11: lamination of two polymeric based films where a partially metallized layer of a first film is contacted with an adhesion layer of a second film; and the non-reactivity of the etchant-metal complex with the adhesion layer.

In summary, Gorrell and Wilson, combined, do not disclose each and every element of amended claim 11. In particular, the combined references do not disclose lamination of a first film with a second film where the first film is composed of a polymeric layer and a metallic layer and the

second film is composed of a polymeric layer and an adhesion layer. Further, Gorrell and Wilson do not disclose the non-reactivity of the etchant-metal complex with the adhesion layer of the second film.

Level of Ordinary Skill in the Pertinent Art

The claimed invention as a whole is directed to a process for preparing a multilayer laminate composed of two films joined or laminated together. The first film has a partially metallized layer supported by a polymeric substrate and the second film has an adhesion layer supported by a polymeric substrate. Etchant is applied to the metallic layer in a stoichiometric amount where the layer is not washed and the retained etchant-metal complex is transparent. The unwashed first film is laminated to the second film and the etchant-metal complex does not react with the laminate adhesion layer. Finally, the entire process, application of patterned design, application of etchant, and lamination is conducted in-line without washing.

One skilled in the art, based on Gorrell and Wilson, could not predict nor reasonably expect the in-line process of amended claim 11 to be successful. Gorrell teaches the use of a water bath (18) and spray water rinses (20) following application of etchant. Specification at column 3 lines 11-12, column 4 lines 36-37, and Figure 1. Wilson also teaches removal of the etchant and dissolved metal by a water spray (72) and a water bath (74). Specification at column 5 lines 55-57 and Figure 7. One skilled in the art would reasonable predict that washing subsequent to etchant application is necessary. Further, there is no teaching nor suggestion in Gorrell or Wilson for preparing a multilayer laminate via an in-line process where the etchant-metal complex is retained, transparent, and does not react with the laminate adhesion layer. One skilled in the art could not reasonably predict an in-line process for preparing a multilayer laminate composed of a first film

and a second film where the first film is composed of a polymeric layer and a metallic layer and the second film is composed of a polymeric layer and an adhesion layer. The metallic layer is treated with etchant and then laminated to the second film where the etchant-metal complex of the first film does not react with the adhesion layer of the second film.

The MPEP provides that:

"to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations."
MPEP 2143 Basic Requirements of a *Prima Facie* Case of Obviousness.

Here, three elements of the claimed process are missing. Neither Gorrell nor Wilson describe: (1) lamination of two polymeric films; (2) lamination in-line with etching; and (3) an etchant-metal complex that does not react with the laminate adhesion layer. Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness does not exist, reconsideration and withdrawal of the 103(a) rejection is respectfully requested.

In view of the above amendments and remarks, Applicants respectfully submit that the pending claims are allowable. Reconsideration of this application is respectfully requested and a favorable determination is earnestly solicited.

Applicants urge the Examiner to contact Applicants' undersigned representative at (312) 913-2128 (direct) if the Examiner believes that this would expedite prosecution of this application.

Respectfully submitted,

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